

Remarks

Claims 1-12, 14-15, and 31-44 are pending for the Examiner's consideration, including amended claims 1, 31-33, 35, 37-39, and 41. Claims 13 and 16-30 previously were canceled, and claim 15 has been withdrawn from consideration. New claims 43 and 44 are presented. No new matter is believed to have been added by the claim amendments and new claims presented herein.

Rejections Under 35 U.S.C. § 102(b)

In the Office Action, claims 31-42 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,384,002 to Leatherman *et al.* ("Leatherman"). The rejection respectfully is overcome.

Independent claim 31, as amended, recites a method comprising, *inter alia*, guiding the first free end along a guide surface so that a first edge portion of the first layer bends and abuts a second edge portion of the second layer, wherein the guiding occurs so that prior to abutting each other only the first edge portion of the first layer and the second edge portion of the second layer directly contact a heated body; heat sealing the abutting first and second edge portions to each other to form a closed end extending proximate an edge of the corrugated thermoplastic panel and to define a space between the rib and the closed end.

Independent claim 37, as amended, recites a method comprising, *inter alia*, guiding the first free end along a guide surface so that a first surface portion of the first layer bends and abuts a second surface portion of the second layer, wherein the guiding occurs so that prior to the first and second surface portions abutting one another, only the first and second surface portions directly contact a heated body; heat sealing the abutting first and second surface portions to each other to form a closed end extending proximate an edge of the thermoplastic panel and to define a space between the member and the closed end.

FIGS. 6-10 of Leatherman illustrate a "forming sequence of the edge sealing apparatus in forming a sealed edge wall in the fluted plasticboard." (Leatherman, Col. 4, lines 9-12). Leatherman discloses a process in which:

[T]he core 31a of the corrugated edge wall melts, with the unmelted edge moved substantially into the form and with the molten plastic 30 completely filling the space or cavity 29 between the unmelted corrugated edge wall 5 and the form 21.

(*Id.*, Col. 7, lines 20-25).

In contrast, the guiding in the inventions of claims 31 and 37 does not involve formation of a core in a cavity as disclosed in Leatherman. Moreover, for example, in claim 37 “a first surface portion of the first layer bends and abuts a second surface portion of the second layer.” As understood, Leatherman does not position surface portions of the layers in such a manner.

Thus, independent claims 31 and 37 are not anticipated by Leatherman, nor are their dependent claims 32-36 or 38-42, respectively.

Claims 31-42 were rejected under 35 U.S.C. § 102(b) as being anticipated by “the Admitted Prior Art in the specification of the present application, which incorporates US 5658644 to Ho et al. by reference.” This rejection respectfully is traversed.

The Office Action refers to Applicant’s specification (p. 1, lines 8-21) which makes reference to a fluted panel as illustrated in U.S. Patent No. 5,658,644 to Ho *et al.* (“Ho”). The Office Action further makes reference to Applicant’s specification (p. 2, lines 18-19 and 26-28) which discusses a finishing method involving “covering the open ends” and another method involving “heating and stamping the flat sheets at the portion of the skins that overlap with a die to press and fuse them together.”

Applicant submits that this rejection fails to apply “the Admitted Prior Art” or Ho to each of the limitations of claims 31-42. For example, the Office Action fails to specify how “the Admitted Prior Art” or Ho teaches guiding the first free end as recited in independent claims 31 and 37. It is Applicant’s position that this rejection, while making mere reference to the hollow board of thermoplastic resin of FIG. 1 of Ho, and otherwise providing only unsupported allegations of what “the Admitted Prior Art” teaches, fails to demonstrate anticipation of the rejected claims.

Claims 37-42 were rejected under 35 U.S.C. § 102(b) as being anticipated by EP 0 332 602 to Wouters (“Wouters”). The rejection respectfully is overcome.

Wouters discloses expanded polyethylene and polystyrene sheets 2 and layers of coating material 4, 5. (Wouters, Col. 3, lines 39-41; Col. 7, lines 5-15). Such foamed materials are not a corrugated thermoplastic panel as claimed in amended independent claim 37. Thus, Wouters fails to anticipate claim 37 or its dependent claims 38-42.

Rejections Under 35 U.S.C. § 103(a)

Claims 1-12, 14, and 31-36 were rejected in the Office Action under 35 U.S.C. § 103(a) as being unpatentable over Wouters in view of JP 5-177752 to Kato (“Kato”). The rejection respectfully is overcome.

Wouters is directed to a procedure for coating elements consisting in expanded plastic, and devices applied for it. Kato is directed to laminating a plastic film at least on one side surface of a corrugated medium.

As understood, Wouters involves layers of coating material 4, 5 that are distinct from the expanded plastic sheets 2, while Kato involves a plastic film that is distinct from a corrugated fiberboard. In contrast, in pending independent claim 1, portions of the panel are subjected to rolling and fusing steps. Moreover, independent claim 31, portions of the panel are subjected to guiding and heat sealing. Applicant submits that neither Wouters nor Kato provide any suggestion or motivation to perform the methods recited in independent claims 1 or 31, or their dependent claims. It is particularly the panel, and not a coating on the panel, to which independent claims 1 and 31 are directed.

Amended independent claim 1 specifically recites a ribbed thermoplastic panel having a first layer with a first end and a second layer with a second end, the first layer being spaced apart from the second layer by a rib directly interconnected therewith. Thus, the layers subject to rolling and fusing as recited in independent claim 1 are those “directly interconnected” by a rib – not the coating material or plastic film of Wouters or Kato, respectively.

Similarly, amended independent claim 31 specifically recites a corrugated thermoplastic panel having a first layer with a first free end and a second layer with a second free end, the first layer being spaced from the second layer by a rib extending therebetween directly from the first layer to the second layer. Thus, the portions of the layers subject to guiding and heat sealing as recited in independent claim 31 are different from the coating material or plastic film of Wouters or Kato, respectively.

With respect to dependent claims 2-12, 14, and 32-36, it is submitted that these claims at least are patentable not only because of the patentability of the independent claim from which they depend, but also for the totality of features recited respectively therein.

Claims 1-12, 14, and 31-42 were rejected in the Office Action under 35 U.S.C. § 103(a) as being unpatentable over Wouters in view of Kato. The rejection respectfully is overcome.

The Office Action states that where “Kato is unclear” as to various limitations, “such would have been obvious in light of Wouters.”

Independent claims 1 and 31 are not rendered obvious in view of the cited references in this rejection, as explained above. With respect to independent claim 37, as amended, this claim specifically recites a corrugated thermoplastic panel having a first layer with a first free end and a second layer with a second free end, the first layer being spaced from the second layer by a member extending therebetween directly from the first layer to the second layer. Thus, the portions of the layers subject to guiding and sealing as recited in independent claim 37 are different from the coating material or plastic film of Wouters or Kato, respectively.

It is submitted that dependent claims 2-12, 14, and 32-36 and 38-42 at least are patentable not only because of the patentability of the independent claim from which they depend, but also for the totality of features recited respectively therein.

Claims 1-12, 14, and 31-42 were rejected in the Office Action under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,037,033 to Hunter (“Hunter”) in view of U.S. Patent No. 4,985,106 to Nelson (“Nelson”). The rejection respectfully is traversed.

As amended, claim 1 recites a method comprising, *inter alia*, rolling at least the first layer along a guide surface toward the second layer and contacting the first layer with the second layer.

As amended, claim 31 recites a method comprising, *inter alia*, guiding the first free end along a guide surface so that a first edge portion of the first layer bends and abuts a second edge portion of the second layer, wherein the guiding occurs so that prior to abutting each other only the first edge portion of the first layer and the second edge portion of the second layer directly contact a heated body.

As amended, claim 37 recites a method comprising, *inter alia*, guiding the first free end along a guide surface so that a first surface portion of the first layer bends and abuts a second surface portion of the second layer, wherein the guiding occurs so that prior to the

first and second surface portions abutting one another, only the first and second surface portions directly contact a heated body.

As understood, Hunter does not teach or suggest rolling as recited in independent claim 1 or guiding as recited in amended independent claims 31 and 37. Nelson discloses use of a “roller arrangement” but is not understood to teach or suggest use of the guide surfaces recited in these amended independent claims.

Claims 1-5, 7-9, 14, 31-34, 36-40, and 42 were rejected in the Office Action under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,630,806 to Kitajima *et al.* (“Kitajima”) in view of the collective teachings of U.S. Patent No. 3,579,396 to Washburn *et al.* (“Washburn”), U.S. Patent No. 3,616,077 to Jessee *et al.* (“Jessee”), U.S. Patent No. 3,031,356 to Bousquet *et al.* (“Bousquet”), and U.S. Patent No. 4,606,784 to Glans *et al.* (“Glans”). The rejection respectfully is traversed.

Independent claims 1, 31, and 37 have been amended as discussed above.

The Office Action states that “Washburn, Jessee and Bousquet all use adhesive to bond the facing sheets to each other” and that “all of them use paper/paperboard for the panel and facing sheets, unlike the thermoplastic panel and thermoplastic facing sheets used by Kitajima.” (Office Action, p. 9). But the Office Action states that “one would clearly be motivated to look beyond these references to additional teachings where thermoplastic facing sheets are being joined to each other to close open ends of a panel.” (*Id.*). And the Office Action, citing Glans, states that “[i]t is known in the art to close open ends of a panel having thermoplastic facing sheets.” (*Id.*).

Glans discloses a method “intended to be used for the folding and sealing of the longitudinal edge on a material web of the type which generally comprises a central carrier layer of paper which is covered on either side with thin layers of thermoplastic material.” (Glans, Col. 6, lines 34-39). As explained above, the layers subject to rolling and fusing as recited in independent claim 1 are those “directly interconnected” by a rib – not as understood in Glans. Similarly, the portions of the layers subject to guiding and heat sealing as recited in independent claims 31 and 37 are different from that of Glans.

Finally, in the Office Action, claims 6, 10-11, 35, and 41 were rejected in the Office Action under 35 U.S.C. § 103(a) as being unpatentable over Kitajima in view of the collective teachings of Washburn, Jessee, Bousquet, Glans, U.S. Patent No. 3,785,908 to

Wagers *et al.*, and U.S. Patent No. 5,545,279 to Hall *et al.* Also, claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kitajima in view of the collective teachings of Washburn, Jessee, Bousquet, Glans, and U.S. Patent No. 5,246,516 to Rias. It is submitted that dependent claims 6, 10-12, 35, and 41 at least are patentable not only because of the patentability of the independent claim from which they depend, but also for the totality of features recited respectively therein.

In view of the foregoing, it is believed that all the pending claims are in condition for allowance, which is respectfully requested. If the Examiner does not agree, then a personal or telephonic interview is respectfully requested to discuss any remaining issues so as to expedite the eventual allowance of the claims.

A Petition for Extension of Time and a Fee Transmittal Sheet are submitted concurrently herewith. Should any additional fees be required, please charge all required fees to Steptoe & Johnson LLP Deposit Account No. 19-4293.

Date: August 15, 2007

Respectfully Submitted,



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Attachments